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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/767,520

01/29/2004

Charles Robert Kalmanek JR.

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26652 7590 05/30/2008  
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EXAMINER

WONG, BLANCHE

ART UNIT

PAPER NUMBER

2619

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/767,520	<b>Applicant(s)</b> KALMANEK ET AL.	
	<b>Examiner</b> BLANCHE WONG	<b>Art Unit</b> 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed May 12, 2008 have been fully considered but they are not persuasive.

Applicant states that "an OSPF router is used in an embodiment of the invention and is not critical for the invention to function as intended." Amendment dated May 12, 2008, p.5, para. 4. However, Examiner respectfully disagrees. Specification, p.12, line 9, discloses "[a] connectivity class is a set of NBMA interfaces attached to one OSPF router that are connected to a single NBMA network ...." According to Specification, OSPF router is critical to the definition of connectivity class and connectivity class is in the claim language. Therefore, whether OSPF router is critical for the invention to function as intended or not, OSPF router is critical what is being claimed.

Applicant replaces "assigning a local number to each of the interfaces" to "assigning a number to each of the local interfaces wherein each of said assigned numbers is local to said first router". Amendment dated May 12, 2008, p.6, para. 10. However, Examiner respectfully disagrees. Applicant's provided support in the Specification, p.13, para. 1, lines 274-282, and specifically in step 202. The "local interfaces" in this part of the Specification is contingent upon the disclosure in the Specification, p.12, lines 11-22, and step 201. "At step 201, the router uses one of several *local* methods to determine whether the router's interfaces are connected to the same NBMA network. ... Where the router has multiple interfaces, *local* connectivity information can be determined by ..." (with emphasis). That is, the "local" interfaces are

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the interfaces of a plurality of interfaces of a router, which are connected to the same NBMA network.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the method of operating a first router (claim 19) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 19-22** are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a procedure to determine NBMA connectivity, does not reasonably provide enablement for a method of operating a first router. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

Specification discloses a procedure to determine NBMA connectivity (Fig. 2), especially when the router has multiple interfaces to different NBMA networks (In Fig. 1, router 131 is the ingress router on the NBMA network and router 137 is not on the

NBMA network, p.7, lines 17-19, inside and outside the “cloud”). In step 201, “a router uses one of several local methods to determine whether the router’s interfaces are connected to the same NBMA network [or not]” (p.12, lines 12-14) and in step 202, “[a router] groups the interfaces into connectively classes using the local connectivity information [obtained in step 201]” (p.13, lines 1-2). Claim 19 recites “[the router] grouping the local interfaces into connectivity classes”. Claim 19 does not recite how grouping is done or how the grouping limitation relates to the previous limitation “[the router] assigning a number to each local interface ...” or the previous limitation “the assigned number is local to the router”.

5. **Claims 19-22** are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for NBMA connectivity, does not reasonably provide enablement for first router. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

NBMA connectivity is critical to a procedure to determine NBMA connectivity and Specification fully disclosed it in Fig. 1 and 2. For example, in Fig. 1, router 131 is the ingress router on the NBMA network and router 137 is not on the NBMA network (p.7, lines 17-19). Specification also discloses inside and outside the “cloud” (p.7, lines 19-20). On the contrary, the significance of a first router, as oppose to all other routers in the network of a method of operating a first router, is impartial in the claim language.

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6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 19-22** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 19, it is unclear what is meant by "local interfaces" in lines 2-3 and 5.

With regard to claim 19, it is unclear what is meant by "local to said first router" in line 6, or whether it means the immediate NBMA network wherein the first router is the ingress router of this NBMA network.

With regard to claim 19, it is unclear what is "information identifying the assigned numbers" in line 8, or whether it is just the assigned number.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 19,20,22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Aggarwal et al. (U.S. 6,330,614) in view of Feldman et al. (U.S. Pat No. 6,055,561).

With regard to claim 19, Aggarwal discloses

assign a number to each of the local **(class C addresses, col. 7, line 27)**  
interfaces **(interfaces to hosts)** wherein each of said assigned number is local to said  
first router **(assign addresses in one of three classes, col. 7, lines 20-21; See A/so  
classes A-E, col. 10, lines 32-33);**

grouping the local interfaces into connectivity classes **(Class A,B,C, col. 7, lines  
25-28; See A/so classes A-E, col. 10, lines 32-33);**

encoding the assigned numbers and the connectivity classes **(put into IP header  
in Fig. 8);** and

transmitting to at least one other router in the communication network **(routers in  
Fig. 9; See A/so OSPF clouds, col. 11, line 10).**

However, Aggarwal fails to explicitly show link state packet.

Feldman discloses a link state packet **(link state advertisements) (a OSPF  
protocol exchanges first types of "link state advertisements to create OSPF  
routing tables, col. 16, lines 13-14).**

At the time of the invention, it would have been obvious to a person of ordinary  
skill in the art to include a link state packet as taught in Feldman, with Aggarwal, to  
provide for a routing table for routing to destination.

With regard to claim 20, the combination of Aggarwal and Feldman discloses the  
method of claim 19.

Feldman further discloses OSPF link state advertisement (**OSPF protocol and link state advertisements**) (a OSPF protocol exchanges first types of "link state advertisements to create OSPF routing tables, col. 16, lines 13-14).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a link state packet as taught in Feldman, with Aggarwal, to provide for a routing table and shortest path to destination.

With regard to claim 22, the combination of Aggarwal and Feldman discloses the method of claim 19.

Feldman further discloses an ATM network (**ATM environment, col. 1, line 17**).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include an ATM network as taught in Feldman, with Aggarwal, to provide for high performance, high capacity communication, and in particular for real-time services. Feldman, col. 1, lines 48-50.

10. **Claim 21** is rejected under 35 U.S.C. 103(a) as being unpatentable over Aggarwal and Feldman as applied to claims 19 above, and further in view of Luciani (U.S. Pat No. 6,418,476).

With regard to claim 21, the combination of Aggarwal and Feldman discloses the method of claim 19. However, the combination fails to explicitly show opaque fields of the link state packet.

Luciani discloses opaque fields of the link state packet (**Fig. 5**).



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At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine opaque fields of the link state packet as taught in Luciani, with Aggarwal and Feldman, for the benefit of synchronizing NAT tables.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BLANCHE WONG whose telephone number is (571)272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Blanche Wong/  
Examiner, Art Unit 2619  
May 26, 2008

/Edan Orgad/  
Supervisory Patent Examiner, Art Unit 2619